

Title (en)  
ARRANGEMENT FOR SUPPLEMENTARY ELECTRIC HEATING IN VEHICLES

Publication  
**EP 0092703 A3 19840613 (DE)**

Application  
**EP 83103342 A 19830406**

Priority  
DE 3215802 A 19820428

Abstract (en)  
[origin: US4520258A] A heater arrangement for an automotive vehicle includes a switching arrangement having a conventional control device which is fed signals from sensors sensing the temperature outside of the vehicle, the temperature inside the vehicle, the temperature of the engine coolant, and the speed of the vehicle. A pulse sequence is generated for controlling a valve which in turn controls the flow of a heating medium to the heating system for heating the passenger compartment of the vehicle, the duration of the pulses in the sequence being varied in accordance with respective conditions. A frequency changer, timer and switch are disposed between an inverter and relay for concomitantly controlling an electric auxiliary heater on the vehicle, such as an electric rear window heater. The switching arrangement provides for switching of the auxiliary heater in conjunction with the switching of the control device for the heating system for the passenger compartment. In this way, separate circuit means for the auxiliary heater can be omitted, and operating convenience is facilitated and expenditure for circuit elements can be considerably reduced. At the same time, energy consumption for the auxiliary heater can be limited because of the auxiliary heater only being activated when needed.

IPC 1-7  
**B60H 1/00**; G05D 23/19; B60S 1/58

IPC 8 full level  
**B60S 1/02** (2006.01); **B60H 1/00** (2006.01); **B60H 1/22** (2006.01); **B60S 1/58** (2006.01); **G05D 23/19** (2006.01)

CPC (source: EP US)  
**B60H 1/00814** (2013.01 - EP US); **G05D 23/1913** (2013.01 - EP US)

Citation (search report)  
• [Y] FR 2442152 A2 19800620 - BAYERISCHE MOTOREN WERKE AG [DE]  
• [Y] EP 0013298 A2 19800723 - BOSCH GMBH ROBERT [DE]  
• [A] FR 2359717 A2 19780224 - BOSCH GMBH ROBERT [DE]  
• [A] DE 2944211 A1 19800508 - TURATTI MARIO  
• [A] FR 2421589 A1 19791102 - SAINT GOBAIN [FR]  
• [AD] FR 2371322 A1 19780616 - RENAULT [FR]  
• [AD] DE 668916 C 19381212 - METALLWERK ALFRED SCHWARZ G M

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**EP 0092703 A2 19831102**; **EP 0092703 A3 19840613**; **EP 0092703 B1 19861126**; DE 3215802 A1 19831103; DE 3367882 D1 19870115; JP S58194614 A 19831112; US 4520258 A 19850528

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**EP 83103342 A 19830406**; DE 3215802 A 19820428; DE 3367882 T 19830406; JP 7156083 A 19830425; US 48872483 A 19830426